CLAIMS

1. An apparatus (1) to assist a patient respiration by delivering air to a patient trough a mask (20), comprising :
- a blower (4) to provide the patient with air under a treatment pressure,
- a control unit (2) to adjust the pressure delivered by said blower at the level of said mask,
- a ramp module (10) connected to the control unit in order to provide the control unit with the value of pressure P_M to settle at said mask, so that when said apparatus starts functioning, the pressure progressively rises until the pressure of treatment P_T;
characterized in that it comprises a comparator connected to the ramp module, at least one means for detecting the patient's breathing parameters and sending them to said comparator, in order in response to said breathing parameters, that the comparator is able to determine that an event (E_1, E_2 or E_3) occurs in patient's breathing and to send the corresponding data to the ramp module which provides the control unit with a value of pressure P_M that will speed up with respect of time, so that the rise of pressure at patient's mask is accelerated.

2. The apparatus (1) according to claim 1, wherein said ramp module provides the value of pressure P_M being a linear function of time wherein the increase coefficient K_{RP} is constant, said ramp module increasing that coefficient of a constant value K_E when the control unit (2) send a data corresponding to said event (E_1, E_2 or E_3).

3. The apparatus according claim 1 or 2, wherein the value of pressure P_M has always maximum and/or minimum limits so that the increase of pressure is also limited in minimum and/or maximum.

4. The apparatus according claim 2 and 3, wherein said ramp module (10) comprises a memory (12) where a minimum coefficient K_{SRP} is stored, said ramp module always maintaining the coefficient K_{RP} equal or superior to said minimum coefficient K_{SRP}, so that the ramp module provides the control unit (2) with a value of pressure P_M always superior to a minimum limit.

5. The apparatus (1) according to claim 2 and 3, wherein said ramp module (10) comprises a memory (12) where a maximum coefficient K_{MRP} is stored, said ramp module always maintaining the coefficient K_{RP} equal or inferior to said maximum coefficient K_{MRP}, so that the ramp module provides the control unit (2) with a value of pressure P_M always inferior to a maximum limit.

6. The apparatus according to any of the previous claims, wherein said means (6) for detecting the patient's breathing parameters enable the control unit (2) to compute the airflow at patient's mask (20), said comparator determining that an event (E_1, E_2 or E_3) is occurring with the airflow parameters or shape.

7. The apparatus according to any one of the previous claims, wherein the ramp module (10) increases the value of pressure P_M when an anomaly, such as snoring or apnea, in patient's breathing is detected.

8. The apparatus according to any one of the previous claims, wherein the ramp module (10) increases the value of pressure P_M when the patient's breathing parameters correspond to a drop between awake breathing and asleep breathing or when they correspond to a stable frequency of breathing.